

5060

**CITY OF RIVERSIDE**  
**HUMAN RESOURCES DEPARTMENT**  
**CLASSIFICATION SPECIFICATION**

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12/19/05

Revised

**TITLE: UTILITIES SUBSTATION TEST TECHNICIAN**

**DEFINITION**

Under general supervision, to perform skilled technical work in the testing, repair and calibration of protective relays and systems, load control telemetering and supervisory controls and related electrical substation equipment; microwave and mobile radio systems, fiber optic communications, cable and terminal equipment, LAN/WAN systems; and to do related work as required.

**REPORTS TO:** Utilities Senior Substation Test Technician

**SUPERVISION RECEIVED AND EXERCISED**

Receives general supervision from the Utilities Senior Substation Test Technician.

**EXAMPLES OF DUTIES**

Typical duties may include, but are not limited to, the following:

- Test, repair and calibrate protective relays and systems, control circuits, power transformers, telemetering, load and supervisory controls.
- Test, repair and calibrate microwave radio, mobile radio and fiber optic communications equipment.
- Troubleshoot circuit breakers, transformers, motors and other malfunctioning substation equipment.
- Use high voltage dielectric testing of cabling, busswork, apparatus and vehicles.
- Prepare work reports and maintain records.
- Assume responsibility for the proper operation of protective relays, substation switching control devices, metering and telemetering equipment.
- Develop test programs, procedures and equipment.

**QUALIFICATIONS****Knowledge of:**

- Principles and practices of protective relays and related equipment and a ability to apply this knowledge to specific work problems.
- Methods, materials and tools used in the installation, testing and repair of air and oil circuit breakers, voltage regulators, transformers and related equipment including a knowledge of electric circuits and wiring systems.
- Testing methods and equipment used in the installation and maintenance of microwave, mobile radio and fiber optic communications systems.
- Working experience with fiber optic multiplexers and LAN/WAN equipment.
- Occupational hazards and standard safety precautions necessary in the work.

**Ability to:**

- Understand and carry out complex oral and written instructions.
- Read and interpret wiring diagrams and schematics.
- Perceive colors accurately.
- Successfully formulate and execute test procedures that insure the proper functioning of equipment and safeguard the public and other customers from power and/or communications interruptions.
- Locate, correct and adjust defects in electrical substation protective and control systems.
- Use and care of hand tools and testing equipment related to electric substations, microwave and radio systems, multimode and single-mode fiber optic systems.
- Work overtime as required.

#### **Education and Experience:**

Any combination of experience and education that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education            Equivalent to completion of twelfth grade.

Experience            Five years experience in specialized and technical testing and repair of electric substation equipment, microwave and radio systems, fiber optic communications systems and LAN/WAN networks.

**MEDICAL CATEGORY:**    Group 2

#### **NECESSARY SPECIAL REQUIREMENT**

Possession of an appropriate, valid class "C" California Motor Vehicle Operator's License.

#### **CAREER ADVANCEMENT OPPORTUNITIES**

**FROM:**            Utilities Substation Test Technician

**TO:**                Utilities Senior Substation Test Technician